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- Trick Stuff For 'Samson And Delilah'
- Magnetic Recordings For Budget Films

MARCH

1950

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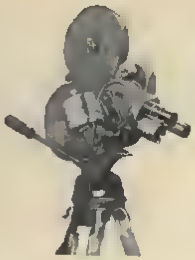

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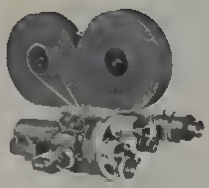

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COVER PHOTO

ASSIGNMENT IN ITALY — Filming scenes on Isle of Capri for Paramount's "September Affair," is Victor Milner, A S C (Black Shirt), standing ankle deep in Mediterranean surf with (from left to right) Skippy Sanford, assistant cameraman. Dewey Wrigley, A S C, operating camera; director William Dieterle; and producer Hal Wallis

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AMERICAN SOCIETY OF CINEMATOGRAPHERS

FOUNDED January 8, 1919, The American Society of Cinematographers is composed of the leading directors of photography in the Hollywood motion picture studios Its membership also includes non-resident cinematographers and cinematographers in foreign lands Membership is by invitation only

The Society meets regularly once a month at its clubhouse at 1782 North Orange Drive, in the heart of Hollywood On November 1, 1920, the Society established its monthly publication "American Cinematographer" which it continues to sponsor and which is now circulated in 62 countries throughout the world

Dominant aims of the Society are to bring into close confederation and cooperation all leaders in the cinematographic art and science and to strive for pre-eminence in artistic perfection and scientific knowledge of the art.

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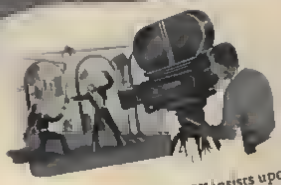

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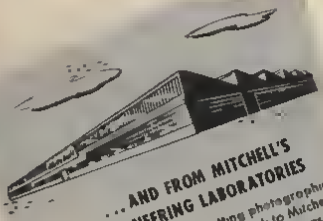

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Cinematographers Set Awards For Best Photography

A.S.C. to cite members for Best Picture Of The Month.

THE AMERICAN SOCIETY OF CINEMATOGRAPHERS, comprising most of the directors of photography of Hollywood, has established its own photographic awards program Monthly, then annually, the Society will cite cinematographers for the best black and white and color photography of pictures in current release. Early in January, the A S C set in motion its plans for the program which begins with monthly selections of The Picture Of The Month and culminates in the annual American Society of Cinematographers' award for the best photography of the year.

The awards program, which has been widely acclaimed by leaders in the motion picture industry, was first suggested by Charles G. Clarke, president of the A.S.C., as an important step in advancing the Society's aims for improving the art and science of cinematography and for bringing about closer relationship of the photography branch with other segments of the industry.

This program also included the addition of a projection room to the A.S.C. clubhouse, a project which was pushed to completion last summer and which was essential to the awards program. With its own projection facilities, the A S.C. now regularly screens motion pictures for technical instruction of its members and as a means of studying and evaluating the camera work of others.

"The advancement of the art and science of cinematography, to which this Society is dedicated," said president Clarke, "implies an obligation to aid our directors of photography in exploring new cinematographic techniques and in advancing new and better means for improving photographic results on the screen. What better way to accomplish this than to provide both a means for film study and incentive to better one's camera work—all of which is encouraged by the A.S.C.'s awards program."

Films eligible for the monthly photo graphic awards are those released for exhibition in the Los Angeles area the month preceding selection. Films are nominated by secret ballot, the members naming their choice of two. The two pictures receiving most votes are then screened at the A.S.C. clubhouse the following week, with a final balloting at conclusion of the screening deciding the best film.

Of additional interest is that part of the awards program which provides for the men who directed the photography on the nominated pictures to precede the screenings with short talks on some of the technical problems encountered in the filming, with a brief question and answer period following.

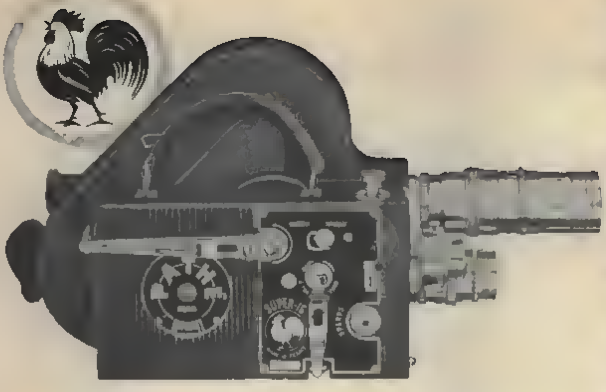
Thus, by seeing the better pictures in release at the clubhouse each month, and from listening to the men who filmed them discuss the technical problems encountered, directors of photography also will be better qualified to vote on the pictures nominated for Academy Awards each year; those who regularly attend the monthly awards screenings will have seen at least 24 of the best photographed pictures made during the year.

It is not the desire of the A S C. that its awards program conflict in any way with the annual Academy Awards. Most cinematographers agree that the A.S.C. program will benefit the Academy by keeping better informed the directors of photography who annually nominate, then vote on the motion pictures for photography "Oscars."

Also, the A.S.C awards will serve to give those pictures released early each year a better break in the Academy voting. It has long been felt by the camera men that by the time the industry starts nominating films for awards the latter part of the year, those pictures screened during January, February, March, etc., are forgotten. With the best photographed pictures for these months already established through the A.S C. awards, they will be kept fresh in the memory of those nominating films for Academy Awards in December.

Voting of A S C. awards is confined to the membership of the American Society of Cinematographers and only by those members attending the monthly run-off screenings. Thus, voting will be done only by those who actually see the pictures, tending for a more accurate evaluation.

The monthly Picture Of The Month awards consist of certificates The annual award will be a specially designed trophy on the order of the Academy's famed "Oscar," which will be presented to the winning director of photography at ceremonies befitting the occasion, sometime in January. END



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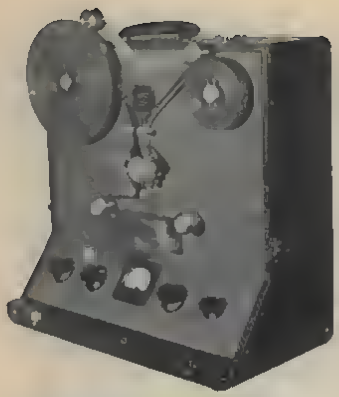

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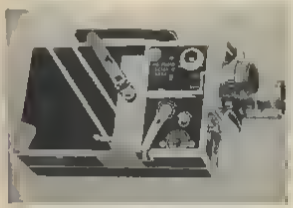

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Hollywood Bulletin Board

TELEVISION continues to look to A.S.C. men to furnish technical assistance for its programs, both live and filmed. Several months ago, Gus Peterson, A.S.C. was engaged by CBS to supervise the lighting of the Ed Wynn TV show, and more recently has added the lighting of the forthcoming Allan Young show to his responsibilities. Last month, KECA acquired the services of Lew W. O'Connell, A.S.C., as lighting consultant on all its television shows. And in the department of filmed shows, Lee Garmes, A.S.C., will direct the photography of a new series of TV films to be made especially for Don Lee's television station, KTSL. At the Harold Roach Studio, Benjamin Kline, A.S.C., is currently shooting the first of a series of television films being produced under aegis of Bing Crosby Enterprises.

•

FRANK PLANER, A.S.C., who has been nominated this year for an Academy Award for his photography of "Champion," teed off a series of recorded broadcasts in German recently for Munich's Radio Center.

•

LEON SHAMROY, A.S.C., nominee for an "Oscar" for filming of "Prince Of Foxes," last month won a Look Award for photography of "12 o'Clock High."

•

SOL POLITO, A.S.C., is being felicitated by his many friends glad to know that he has been discharged from the hospital where he was confined for over a month from injuries sustained when his idling automobile started to roll, as he opened his garage, pinning him against the door.

•

CHARLES ROSHER, A.S.C., found a refreshing new assignment awaiting his return from his recent Caribbean vacation. In Hollywood only a few hours, MGM sent plane reservations for a hurried trip to the Hawaiian Islands to scout locations for that studio's forthcoming "Pagan Love Song," to star Esther Williams.

•

ROBERT SURTEES, A.S.C., returned to Hollywood last month from Africa, where he had been directing the photography on Metro-Goldwyn-Mayer's "King Solomon's Mines." Studio reportedly spent over $1,000,000 in blocked funds during the five months' Technicolor shooting. Surtees resumed filming of the production at the studio February 20th.

RICARDO MARCELINO, A.S.C., last month completed the editing in Hollywood of the first color film produced in the Philippines. Photographed on Ansco Color by his son, film was shipped daily by air-express to Hollywood where it was processed by the Houston Corporation. Marcelino, working closely with Houston technicians, relayed camera instructions to his son after each batch of film was processed, and virtually directed the photography on the entire picture by cable! Reports indicate the film played to capacity audiences during its premiere showing in Manila.

•

COL. NATHAN LEVINSON'S sound department at Warner Brothers has developed a new type blimp that eliminates noise from projectors used in process photography. Blimp is a light-weight easily removable aluminum cover and was used for the first time in process shots for "Lightning Strikes Twice," which was photographed by Sid Hickox, A.S.C.

•

ACADEMY of Motion Picture Arts and Sciences has acquired for its library a valuable collection of films made by George Melies, French magician and motion picture producer, between 1903 and 1908. Melies, a skilled magician, used many unusual trick effects in producing the films. He wrote the stories, built his own sets, handled the camera and often played the star roles. The Academy plans to make prints and present a special program for Academy members.

•

A.S.C. MEMBERS have negotiations under way for a radio program which will feature various Hollywood directors of photography in dramatizations of their most interesting experiences. Test airing of sample scripts is scheduled for sometime next month.

•

TOM TUTWILER, A.S.C., shooting a series of films for the government in Alaska, reports that his special, temperature-conditioned Mitchell camera is performing "like a Swiss watch" despite one of the severest winters on record for that territory.

•

WILLIAM DIETERLE was guest of honor at the February meeting of the American Society of Cinematographers, and talked of his experiences in producing "Vol-

(Continued on Page 106)

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Raphael G. Wolf Studios, Hollywood producers of top-notch motion pictures and TV shorts shooting a scene for a commercial with the Maurer 16 mm., for a major refrigerator and range manufacturer

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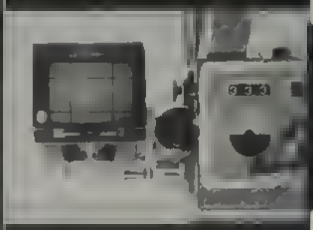

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MINIATURE of Temple which had to be destroyed and rebuilt three times in order to get a satisfactory "take." Some idea of its size — 1/3-scale — is indicated by Gordon Jennings, A.S.C., standing in center

FRAME ENLARGEMENTS of the completed scene, showing the actors doubled in. Lower third is full-scale, middle third, part miniature and full-scale, and the top, all miniature — a fine example of precise special photographic effects work achieved by use of a new electronic camera control called a "repeater."

MATTS, MINIATURES AND METICULOUS CINEMATOGRAPHY

These were the cinematic techniques employed in producing the realistic Temple scenes for "Samon And Delilah."

By FREDERICK FOSTER

HAD CECIL DEMILLE made "Samson and Delilah" fifteen years ago, the massive Temple set, which is tumbled to earth by an enraged Samson would have been constructed out of doors and photographed in sunlight. However, today's greatly increased construction costs made erection of the Temple set in full-scale prohibitive, also, its destruction, called for in the script, posed special photographic problems as well as problems of safety for cast and personnel.

Gordon Jennings, A.S.C.

As it was, the Temple set was filmed indoors on a Paramount sound stage. The set was small by comparison with sets in earlier DeMille epics, such as "King Of Kings." Yet on the screen it appears to surpass in size and scope any DeMillian sets of yesterday. The illusion is due to cinematographic magic contributed by Paramount Picture's special photographic effects department, headed by Gordon Jennings, A.S.C.

The principal photographic job on this picture, of course, was executed by director of photography George Barnes, A.S.C. Working in close cooperation with Barnes, Jennings—with his assistants Devereux Jennings and Paul Lerpae—handled the difficult problems that usually arise in epic productions of this kind where set costs must be kept to a minimum or where it is impossible to photograph the picture in natural settings.

Before describing how the opening Temple scene was filmed, it should be noted that its very effectiveness and realism are due in no small way to electronic apparatus developed earlier by Jennings and G. L. Stancliff, Jr., and used in conjuction with the camera. Called a "repeater," this electronic device, coupled with a highly technical nodal point camera mount and activating a constant-focus photographing channel contrivance, makes it easy for Jennings and his trick experts to matt (or block out) unwanted backgrounds from each frame of film, and permit other images to be substituted

PARAMOUNT PICTURE'S special camera that works in conjunction with the recently developed electronic repeater, pictured at right, which films matt shots with infinite accuracy. Small Servo motors control tilt and pann

or superimposed with infinite accuracy. Also, the "repeater"—by recording on a roll of film the movement pattern of the camera to which it is coupled—enables the camera to accurately repeat its action pattern (panning and tilting) when photographing action to be superimposed over the first.

By employing the repeater and the special camera used with it, Jennings was able virtually to build the impressive Temple set photographically through a series of separate takes and the multiple matt shot technique. The completed scene was a composite consisting of miniature and full scale sets in which live actors were used and doubled into miniature section of set. A comparison of the miniature set with the completed scene as filmed by Jennings, may be seen in the photos at the top of opposite page.

The photo on the left is of the miniature, and some idea of its exact size is indicated by Gordon Jennings standing in the center, holding one of the dolls. Immediately opposite is a frame enlargement taken from the film, showing the scene as it appears in the picture. All of the people seen in this photo are live actors, doubled into the scene.

The major composite shots which make up this scene were all filmed with the same camera, from the same camera position, and with the camera under the control of the electronic repeater. There was no operator handling the camera at any time. This function was remote-controlled by the pre-recorded tracks running through the electronic repeater.

The scene is roughly divided into three sections (with no lines of demarcation evident, of course), viz.: the foreground and lower one-third, which is full scale; the middle third, which is part full-scale and part miniature, and the top third which is all miniature. For the lower third, a full-scale replica of the base and foreground of the Temple had to be built. Where live action was required in the middle third of the scene, the people were photographed against black velvet in a separate take and matt-printed into the scene. How well the multiple takes were wed into a composite scene is evident in the frame enlargements from the film sequence that appear on these pages.

Interesting is the fact that before this set was constructed, either in miniature or full scale, it was plotted in advance with aid of the camera. Jennings moved his special camera and repeater to the sound stage and here, with director DeMille and his production associates and technicians, plotted on the bare stage floor the opening Temple scene and the closing climactic scenes of destruction of the Temple, with only set blueprints as a guide. Members of the technical staff substituted for actors in running through the principal action, under direction of Mr. DeMille and thus Jennings was able to establish his camera positions.

After Mr. DeMille was satisfied with the rehearsed action, Jennings made a "dry run" of the scene with the camera and repeater interlocked, for the purpose of making the repeater cue track to be used later when filming action on the completed set. Thus the pattern of camera action for all future major takes on this set was established, recorded on the repeater track, so that no matter how many times the camera was employed on the set in filming action for matt shots, it would match previously photographed footage precisely.

This made it possible for Jennings to shoot the lower third of the scene on the full scale set first, with the upper two-thirds masked off. For the middle third, he photographed the identical area of the corresponding miniature set which was matched up later with the lower third, in the optical printing department, but before this was done there were people to be added to the scene, and these were photographed in a separate take.

(Continued on Page 98)

EPEATER, in foreground, guides camera movement in aking multiple matt shots via recording on rolls of film atching repeater in action are 1L to R) Cecil DeMille, L. Stancliff, Jr., co-developer of device, and Frank Butler.

PICTURES at right are frame enlargements from sequence in "Samson And Delilah," depicting spectacular destruction of Philistines' Temple. Scene is a composite shot, engineered by Gordon Jennings, A.S.C., and his staff, employing miniature and full-scale sets and multiple matt printing.

SIMPLICITY of dubbing magnetic film to picture track is demonstrated by Telefilm's sound engineer, Peter Glaga, to Jim Pinkham, company's ad head. Equipment shown is Kinevox.

RECORDING commentary for a two-reel industrial film at Telefilm's sound studio, using one of the Kinevox magnetic film recorders, which is part of that company's modern sound equipment.

Magnetic Recording Boon To Budget Film Production

New medium, rapidly being adopted by major studios, already is saving money for makers of television, industrial and low-budget feature films.

By DON HARROLD

Research and Development Engineer, Telefilm, Inc.

PRODUCERS of commercial motion pictures as well as those engaged in making films for television are constantly endeavoring to improve the overall quality of their product although handicapped, in many cases, by the limitations of a meager budget. This results in a continual search for new techniques and tools which to work.

One of the latest and most important developments in this direction has been the introduction of synchronous magnetic recording. This new medium allows considerable versatility in securing good quality lip-synchronous sound for master, or original, and has a number of advantages over direct optical recording on film. A large number of major productions are using this medium and more and more interest is being manifested by the smaller commercial and television producers.

Techniques will vary somewhat with different types of production but in all cases the advantages to be gained through the use of magnetic recording are the same. Generally speaking, these are as follows:

Sound takes can be played back immediately after recording and instant judgment made as to quality and correctness. This eliminates processing delay and, in many instances, costly retakes due to doubts where sound is concerned.

The extreme portability of location-type units is another characteristic of most synchronous magnetic systems now available. On productions where a maximum number of set-ups per day are required, the elimination of cumbersome sound equipment results in the saving of many man hours. The more popular magnetic recorders are generally composed of one or two units built into easy-to-handle carrying cases. And since the recording stock consists of a magnetic emulsion on double perforated 16mm. or split 35mm. film, bulky film magazines and loading bags are eliminated. The total weight of magnetic equipment for location work will vary from 90 to 150 pounds.

In the case of producers using film service organizations for the technical assembly of their final picture, this new medium has much to offer in that the magnetic master may be re-recorded for any type of release. A typical example for a television short subject is as follows: sound takes are voice marked before each scene with the camera using slap sticks and slate as usual. The original picture and sound are then turned over to the film service organization where an optical sound track work print is re-recorded from the magnetic master. This is then cut to a picture work print and checked for perfect sync.

When this has been done, a printing sound track is re-recorded from the magnetic master and it is at this step that sound levels and equalization are corrected. The printing track is then matched to the track work print and made ready for duplicating with the original picture. The master can then be held as a safety with no deterioration of sound quality or can be erased and the stock used again. However at Telefilm we are preparing to transfer masters to synchronous acetate discs when it is deemed advisable to hold a recording for future use. This method is particularly advantageous in cases where a vast demand for prints causes sufficient wear

(Continued on Page 100)

The Men Who Light The Sets

Lighting of motion pitcure sets is the responsibility of the director of photography. His skill in using light enhances the glamour of stars and makes Hollywood's movies tops the world over.

By GORDON TAYLOR

USING A METER to check intensity of light falling on players, director of photography Arthur Arling, A.S.C., calls to electrician for change in position of an overhead lamp. All set lighting is similarly checked by the director of photography before the camera rolls

LIGHTING MOTION PICTURE sets for photography today is an exacting science, which directors of photography have developed collectively through years of experience. When early motion pictures were made, sunlight and skylight were the only sources of illumination. The need for auxiliary lighting of uniform, controllable character made itself evident quite early and ultimately the carbon arc and incandescent lamps were introduced as lighting sources for motion picture photography.

The introduction of panchromatic film and new high wattage incandescent lamps, coinciding with the introduction of sound, brought about a major change in set illumination practice. The director of photography's desire for accurate control of light resulted in development of the condenser-type spotlight, diverging doors, spill rings diffusers, special reflectors and finally the Fresnel-type lens. With this growth in equipment and technique of set lighting there also came into being, as a vital cog in the growing staff of cameraman's assistants, the man we know today as the "gaffer" or head electrician assigned to each production.

In the early days, the cameraman had little or no control of the light. He was obliged to wait until "the sun was just right" or to set up his camera according to the way the light was falling on the set or scene. Today, with most sets photographed indoors on sound stages, the light is placed by the gaffer and his crew according to the director of photography's needs.

The gaffer is sometimes erroneously credited with lighting the sets. He and his crew do the physical work of handling and setting up the various lighting units, but placement of the lights is directed by the director of photography following his survey of the set and his decision as to its lighting requirements.

This direction of light placement follows a thorough study of the script and consultation with the picture director and production heads by the director of photography. The usual procedure is for the director of photography, after reading the script, to join with the director in a discussion of the photography of the picture. From this discussion he usually develops the basic lighting pattern he expects to use.

Subsequently he sits in on set meetings and budget meetings and the result of these discussions further molds his lighting plans. If sharp economy is a factor, then lighting will be kept simple, but if the producer values the best in photography as an asset to the production, then the director of photography usually spares nothing in the lighting in an effort to produce the best photographic result.

When the director of photography is ready to light the set, he then calls in his gaffer and outlines his lighting plans. Usually, as the production progresses, he will go over the set on which the company will work next and give the gaffer instructions for "roughing in" the basic lighting. Thus when the company is ready to move over to that set, there remains only a few additional light units to be placed or perhaps minor changes to be made in placement of lamps already on the set.

In the preliminary arrangement of lighting equipment the gaffer, under the direction of the director of photography, sets in place the floor and overhead units. The director of photography establishes the "key light," which is directional illumination measured near the face of the principal character, and then rearranges, reduces, or intensifies the illumination falling upon other areas to achieve the desired balance. "Balance" is largely an artistic or dramatic rather than a strictly technical effect.

Although exposure meters are in common use by cinematographers, the gaffer ordinarily does not use one. His problem is to arrange the various pieces of equipment, such as lamps, diffusers, dimmers, etc., so that the dircetor of photography may establish a "balance" in a minimum of time. The placement of this equipment depends upon the experience of the gaffer, his knowledge of the desires of the director of photography, and the advance conferences that take place between them before the set is rigged.

Color photography is more exacting than black and white photography. In color photography, variation in light quality

(Continued on Page 102)

Oscar Nominees For 1949

Directors of photography of five color and five black and white films nominated by Academy for Achievement Awards.

By LEIGH ALLEN

ELEVEN directors of photography—all members of the American Society of Cinematographers — have been nominated by members of the Society and directors of photography in the Hollywood studios as contenders for Academy Awards for achievement in motion picture photography for 1949. Five of them directed the filming of five black and white feature productions and six were engaged in filming five productions in Technicolor as follows:

BLACK AND WHITE

Joseph LaShelle, "Come To The Stable," (20th Century-Fox).

Frank Planer, "Champion," (Screen Plays-United Artists).

Leon Shamroy, "Prince of Foxes," (20th Century-Fox).

Leo Tover, "The Heiress," (Paramount).

Paul C. Vogel, "Battleground," (Metro-Goldwyn-Mayer).

COLOR

Charles G. Clarke, "Sand," (20th Century-Fox).

Winton Hoch, "She Wore A Yellow Ribbon," (Argosy-R.K.O.).

Robert Planck and Charles Schoenbaum, "Little Women," (Metro-Goldwyn-Mayer).

William Snyder, "Jolson Sings Again" (Columbia)

Harry Stradling, "Barkleys of Broadway," (Metro-Goldwyn-Mayer)

Early this year, the titles of more than fifty black and white and color productions released during 1949, were submitted to the Academy of Motion Picture Arts and Sciences for consideration. These in turn were submitted on a preliminary ballot to each of the industry's directors of photography. Result of the initial balloting narrowed the list of probable contenders down to ten black and white and ten color films. After special screenings of each of the 20 films, a second balloting produced the list of ten nominees above.

1949
NOMINEES
FOR CINEMATOGRAPHY AWARDS

BLACK AND WHITE

Joseph La Shelle
Frank Planer
Leon Shamroy
Leo Tover
Paul C Vogel

COLOR

Charles G Clarke
Winton Hoch
Robert Planck
Charles Schoenbaum
William Snyder
Harry Stradling

★

★

★

These films will now be re-screened for members of the Academy who will then vote to select the best black and white and best color production for the Cinematographic Awards — in other words, the gold Oscar statuettes. Only members of the Academy of Motion Picture Arts and Sciences participate in the final voting.

The winners will be announced along with those in other branches of the motion picture industry at the gala annual Academy Awards presentation ceremonies, which will be held the night of March 23rd, at the Pantages Theatre in Hollywood.

The selection of films for the annual Cinematographic Awards begins each year with the directors of photography themselves. Shortly after the first of the year each director of photography is invited to submit to the Academy for consideration the name of one black and white production on which he has received single or joint screen credit — also name of one color production, if any, bearing similar credit — and these are included on the preliminary ballot previously mentioned and which is then mailed to the cinematographers for a primary voting.

Each director of photography indicates his choice of the ten best black and white and ten best color productions on the ballot and sends it to the Academy. The ten films receiving the most votes in each class are then placed on a secondary ballot, given a special screening by the Academy for the purpose of giving all directors of photography opportunity to re-view the films, and are then voted on again by the directors of photography to select the five nominees in each class

Of the eleven men whose cinematographic handiwork is nominated for 1949 Awards, four have previously won Oscars for cinematography. Leon Shamroy has three Awards to his credit: "Black Swan," 1942; "Wilson," 1944; and "Leave Her To Heaven," 1945. Joseph LaShelle won an Award in 1944 for his Technicolor photography of

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Something New In Color Temperature Calculators

New device, when attached to a General Electric type DW Exposure meter, provides instrument for measuring both color temperature and intensity of light.

By RALPH LAWTON

THE USE OF color films, especially for motion pictures, requires that the light source used in exposing them be carefully measured not only for intensity but for color temperature as well. As a result, there have been developed and placed on the market by several manufacturrs, a number of color temperature meters.

Designed to make the measuring of color temperature of light as simple as using an exposure meter, most of the color meters also indicate instantly the correction filter that should be used in a given light in order to properly balance it for the type of color film used.

Some of these meters already have been described in earlier issues of AMERICAN CINEMATOGRAPHER. This month we are reporting on one of the newest of color temperature calculators, which the manufacturer calls a "color attachment," rather than a meter—probably because it is not entirely a metering device in itself but forms a complete color temperature meter when used with any type "DW" General Electric exposure meter. We refer to the Harrison Color Attachment shown in the photo below.

Hartley Harrison of Harrison & Harrison, well-known optical engineers of Hollywood, designed this color attachment which snaps onto the G E. meter in a jiffy and immediately makes a composite instrument that functions both as a color temperature meter and an exposure meter In other words, with the attachment in place, the meter may be used for both color temperature reading and exposure calculation.

INTO THE rectangular opening in center of Harrison Color Attachment the G. E. exposure meter is snapped in place to provide a combination instrument that gives both color temperature and light intensity readings for color photography Conversion tables at top give data on CC filters to use for color correction.

Naturally, it is photo-electric in its measurement of color temperature, operating off the G.E. meter cell. What it specifically does is to measure the color of light for color balance and the amount or intensity of the light for exposure at the same time and from the same position. The exposure readings are of incident light—direct sunlight, direct skylight or direct artificial light.

The Harrison Attachment comprises an all-metal case with an orifice in one side that takes the General Electric meter with its hood removed. The meter snaps in place and may easily be removed for normal use. There is a similar opening on the opposite side which is covered with a panel of ground glass. Within the attachment are an adjustable shutter and two graduated color step-wedges—one red and one blue. At the bottom of the meter is a plunger for bringing the step-wedges into place before the meter cell, and a revolving disc for setting the shutter at the proper opening.

To take a color temperature reading of the prevailing light as it falls on subject or scene, the meter is read—not from the camera position—but from the approximate position the players occupy in the scene. The attachment is pointed directly at the camera lens. The plunger (activating the step-wedge) is depressed; then by moving the shutter control disk, the meter needle is set at 10 on the meter scale. When the plunger is released, the meter needle will move to the right, indicating the color temperature.

Thus, for example, if the G.E. meter needle swings to 35, a glance at the conversion table (extending from top of Attachment) would indicate that a C½ (Harrison & Harrison) color correction filter should be placed before the camera lens to balance the light for daylight color films. If photo-flood color film is used, then a C4 filter would be required The conversion table gives filter data for three types of color emulsions— daylight color films, photoflood color films, and tungsten color films—embracing all present movie and still camera color films.

The conversion table embossed on a panel of metal, which extends from top of the Attachment, shows a complete photographic range for any light condition. It indicates the conversion of foot-candles to color temperature from 2800 to 30,000 degrees Kelvin, which is the range of the Attachment.

The conversion table provides a dual scale, so that the meter needle may be pre-set at 10, representing 1,000 foot candles

(Continued on Page 99)

"PROFESSIONAL JUNIOR" Camera Equipment...

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Interchangeable - Removable Head Tripods

Friction Type Head on Standard Tripod Base and Collapsible Adjustable Metal Triangle

FRICTION TYPE

Handles 16mm EK Cine Special with or without motor, 35mm DeVry and 400' magazines and all 16mm hand-held cameras. Head is interchangeable with the Gear Drive head. Both types fit "Professional Junior" standard tripod base, "Hi-Hat" and "Baby" all-metal tripod base.

GEAR DRIVE

The head, made of Dow Metal magnesium, weighs but 5½ lbs and is interchangeable with the Friction type head. It handles all types of cameras as Snap-on metal cranks control pan and tilt action from both sides. Werm-driven gears are Gov't spec. bronza

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BLIMP for EK 16mm. CINE SPECIAL

This Blimp constructed of Dow Metal magnesium, is thoroughly insulated to afford absolute silent operation. Exclusive features: Follow focus mechanism permits change of lens focus while camera is operating in Blimp. Blimp takes synchroneus motor drive which couples to camera. A dovetail bracket is provided to mount an erect image viewfinder.

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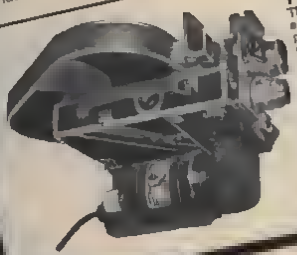
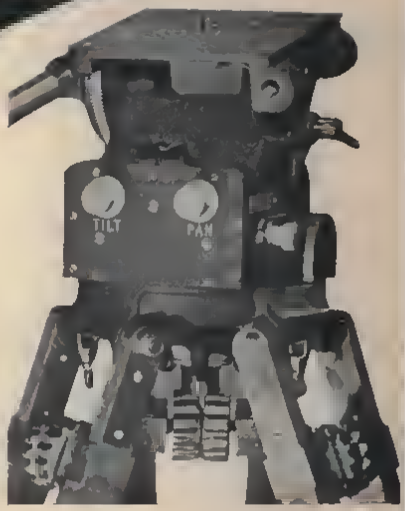
This motor will run in synchronization with either 16mm or 35mm sound recorders. It is provided with mounting platform which permits removal of magazine while camera remains mounted on motor. Drive coupling attaches to single-frame shaft of camera and is mated to spring-steel drive arm of motor gear box. This assures that camera mechanism cannot be damaged if a film jam occurs as the spring steel arm drive will shear. This is easily replaced. A knurled knob on motor armature permits rotating for threading. "On-Off" switch built into base. Platform base threaded for ¼" and ⅜" camera tie-down screws. Rubber covered cable with plugs included.





Small GYRO Tripod

This light weight GYRO Tripod performs with all the efficiency of larger, heavier and costlier tripods now in use.

New, small size GYRO tripod handles all 16mm. professional type cameras: Mitchell 16mm.; Auricon single system; Maurer 16mm.; motor-driven Cine Special; also 35mm. motor-driven Eyemo with 400' magazine. It features Super Smooth Pan & Tilt Action.

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Making a three-shot sequence of a simple home movie of family activities. Heavy dotted lines indicate long, or opening-shot composition. With camera set up at B, a closeup is made of the mother. Then a reverse closeup shot is made of child from position C. All three takes are of the same action but the variety in camera angles increases pictorial interest—requires little more film than a single long shot.

How To Build Basic Movie Sequences

The mechanics of shooting scenes for continuity.

By CHARLES LORING

MAKING REALLY interesting 8mm. or 16mm movies is not nearly so much a matter of camera as the fellow behind the camera. What he puts into his photography in terms of planning, ingenuity and pictorial artistry depends on how much he has learned during those primary sessions spent with his camera shooting family and friends, vacation trips and similar fare. If, after months—or years—of filming such subjects, the movie amateur still turns out "snapshot" movies without continuity or sequence, then it's time someone tapped him on the shoulder and said, "Look, Bud, why don't you try putting a little professional polish on your movies?"

And how does he go about learning how to apply this expert "polish?" Well, he can take instruction from a reliable photographic school, or he can steer a course of concentrated home study on movie making, reading photographic magazines and books devoted to the subject. The latter is less costly and will produce remarkable results. If he's really interested in acquiring the knack for making movies that tell interesting stories, then this may be the place to begin—by finishing reading this article in which we shall explain some of the fundamentals necessary to building basic movie sequences.

First, in order that certain salient movie making terms subsequently used here shall be clear in the mind of the reader, we define them as follows: *Continuity* implies logical flow of one element into the other—the dovetailing of one scene with the next and subsequent scenes. The *Scene*—the basic unit of movie construction—is the individual shot or "take" you make each time you start and stop the camera. A *Sequence* consists of a series of related scenes photographed and edited to produce a unified idea—a story.

Building a basic sequence is not difficult if we draw a parallel between it and the function of the human eye in absorbing a new situation. When we enter such a situation it is quite natural that our eyes first wander over the entire set-up studying the overall pattern without paying attention to fine detail. Once we have thus oriented ourselves, we naturally select what appears to be the most important element of the situation and narrow our vision down to concentrate upon it. If there is one particular part of that element that is especially important or striking, we narrow our vision still more until we are concentrating upon a very small but important segment of the overall pattern. Having satisfied our curiosity thus, we look around once more to take in details of the general situation.

In terms of screen mechanics this procedure almost automatically translates itself into specific shots or angles. Thus, the overall glance corresponds to a long shot, the selection of the most important element parallels the medium shot, whereas the narrowing down of attention to select one small segment of that element corresponds to the closeup. The final glance about to re-establish the situation usually evolves into a shot somewhere between a long shot and a medium shot.

The bewildered novice invariably asks the question: "How far away from the subject do you have to be in order to get a long shot?"—or perhaps "Just how close to the subject are you when filming a closeup?" There can be no truly accurate answer to either of these questions, because all of the terms involved are purely *relative*. To illustrate this point, may we observe that a long shot of Boulder Dam, for example, would be vastly different in set-up from a long shot of a bee gathering honey. One might involve miles and the other inches between camera and subject—and yet each, relatively speaking, would be a valid long shot of its respective subject.

In defining our shots, therefore, we can only speak in terms of function rather than sizes or distances. Purpose of the long shot is to acquaint the viewer with the overall situation and to provide a spacial and atmospheric context for the closer scenes which are to follow. The

(Continued on Page 96)

Waiting for your ship to come in?

Photography is simply writing with light. Sounds easy, doesn't it?

It is, and it *isn't*. And if you're still waiting for your "ship to come in"—clear, well-exposed, razor-sharp screen images, regardless of light conditions—Ansco Triple S Pan is the superlative answer.

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Add to this, Triple S Pan's long, smooth gradation scale—its wider latitude—and you can't help having movies with that fresh, professional, complimentary look! **Ansco, Binghamton, N. Y.** A Division of General Aniline & Film Corporation. *"From Research to Reality."*

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Better Movies Through Editing

As in professional film production, there is more to making movies than simply photographing them. Editing is an equally important phase—and the most fascinating.

By JOHN FORBES

YOUR MOVIES are never completely ready for screen presentation, as they come from the processing laboratory Oh, sure—you probably screen them that way, several times. But what you do with them next determines whether you are a real dyed in the wool cine amateur, getting the most out of your hobby—a movie maker with a future—or another indifferent movie "snapshooter" who never really gets complete satisfaction from making movies because he neglects the important part of it—editing

Hollywood studios spend as much time editing their pictures as they do shooting them. But far too few amateurs do this. Many of them do not yet realize that the editing and "polishing" stage is highly essential to making 8mm. and 16mm. movies with lasting screen appeal. Take any one of the national amateur movie contest winners—each will testify to endless hours of viewing and reviewing his films, cutting here, adding footage there and rearranging scenes to produce the best pictorial and continuity appeal. And invariably each will admit that putting the picture together at the editing table was the most fascinating part of its making.

You see, in editing you are dealing with something concrete, which is the reason why you'll find greater interest in this phase of making movies. You may have taken great pains to insure good photographic results in filming each scene, but you won't be sure it came out the way you wanted it until you get the film back from the processor. But with this film, no matter what the photographic result, it is possible for you to make of it something far exceeding your original plans through careful and inspired editing.

Some cine amateurs never get started with editing because they lack the equipment. However, this needn't be a problem beyond acquiring a splicer and a pair of rewinds. Of course, the easy way to do it is to purchase a motion viewer which enables you to inspect your film in motion as you run it between the rewinds; but in the beginning you can use your projector for this. Mount it on your editing table and project your films upon a white card set up at the far end of the table. In this way you can run your films several times and study them for cutting without having to resort to more tedious inspection using a small magnifying glass. Using a grease pencil, you can mark your films, too, as they pass through the projector, thus indicating where to make cuts, deletions, or insert a title.

FIRST STEP in editing is to view and study each scene with an eye to editing it to best advantage pictorially and for continuity. Begin by screening your film or looking at it with a motion-viewer, making notes as a guide to cutting and editing, and for titles.

But regardless of the method to be followed, the first step is to decide what you are going to do with the film and how you are going to do it This means projecting all the film and studying it, familiarizing yourself with each scene Let us suppose, for example, you have a dozen rolls of Kodachrome shot on your vacation. That's twelve hundred feet of 16mm film, and you should know from the very beginning that not all of it will wind up in your finally edited picture—nor should it. If you are an average amateur, you'll not cut it down much more than two or three hundred feet, but an expert film editor would probably make an interesting, rapidly moving narrative out of it using not more than 400 to 600 feet. Of course, as we said before, this is cited as an example; a great deal would naturally depend on the subject matter, whether there are ample long, medium and close shots for intercutting, and finally, how much of the footage was correctly exposed and therefore justifies consideration at all.

So with the dozen rolls before you, you screen them one by one and make brief notes on a pad of paper, as a guide to breaking down the rolls into individual scenes. You may already have your script prepared; if not, the next step is to prepare a sketchy outline of how you intend to put the picture together to tell a story. In breaking down the rolls (cutting the individual shots apart) don't try to trim

scenes nor delete excess frames of leader strips—except, of course, under- or over-exposed scenes that can't be used. These can be discarded at once, leaving less footage to handle and more space on your reels. (You see, already your overall footage is beginning to diminish!)

Keeping the individual clips in order, ready for splicing, now becomes your immediate problem. In studio cutting rooms, a large cloth basket, similar to a fabric clothes hamper, is provided into which the film strips are run and the ends, with identifying marks, clipped to edge of the basket near the top. You can rig up a similar gadget, using a pillow case and a wire loop. The fabric bag keeps the film off the floor, makes it unnecessary to wind each strip into an individual roll (which sometimes results in scratching through careless cinching) and besides protecting the film generally from damage, enables you to pick up a scene for splicing with the least trouble. A simple means of identifying each film strip is to use spring clothespins, numbered with ink, to clip the film to edge of bag. Identifying data is marked on a scratch pad opposite corresponding numbers.

If your continuity plan is indefinite, it's best not to splice your various scenes together as you arrange them in order on the reel the first time, but use bits of scotch tape (applied to the base side). Small, round paper clips are sometimes used for this also, but, in careless hands, they may result in scratching the film. Once your film has been put together by this method, you can go over it to make sure every scene is in order, according to script, and that none has been excluded or forgotten. This done, you may then proceed with splicing—but do not attempt any critical, down-to-the-final-frame cutting at this stage. Better wait until you see your first "rough cut" on the screen.

Now comes the most interesting part of editing. You are now well on the way to making a real motion picture out of that footage that only yesterday was a jumbled array of film rolls. Now it is taking shape—assuming continuity, and having more pictorial appeal on the screen.

If you were careful in the filming, the scene lengths may be just as you want them, and there are closeups for emphasis, so essential for good tempo in cutting. Obviously, only by seeing your material screened would it be possible to give pointers on its cutting; but generally speaking, carefully match your action between long, medium and closeups. Don't keep a scene on the screen longer than is absolutely essential, in spite of the fact your color film cost

(Continued on Page 100)

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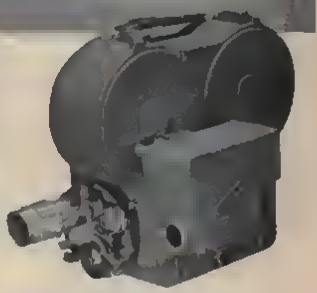

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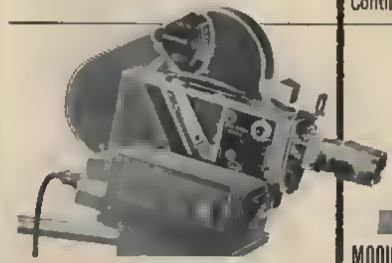

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Problems Of Producing A Television Newsreel

By JOHN SANDSTONE

Courtesy, International Projectionist

WHILE QUALITY IS by no means neglected, producing a daily newsreel for one-shot airings means amazingly close deadlines and pressures never experienced by theatrical newsreel people. Every operation, from camera work through editing and writing, all the way to distribution, must be performed at top speed.

The pressure is by no means eased when the film is finally delivered to the TV outlet: transportation slowdowns or the press of late news may have delayed delivery until a minute or two before program time.

One familiar with film processing problems—cutting, writing, editing, and shipping film in quantity—will appreciate the job involved in producing a daily newsreel. Advance and holdover stories are unknown. Each day represents a complete production cycle, starting with out-of-town and foreign stories picked up at the airport early in the morning, and local stories shot late the previous day. Complicated by stories arriving during the day, the job of putting together a newsreel goes on right up to the lab deadline. By nightfall a 10-minute reel is ready for telecast. Next day the same routine is repeated.

Illustrative of the high-speed coverage attained was a recent assignment to Roosevelt, N.J. A camera crew left our New York office at 1 p.m., travelled 70 miles to Jersey, spent 30 minutes in shooting 400 feet of film, returned to the office—and at 7 p.m. that evening the cut and edited story was on the air.

A statistical analysis of the handling of such a story is of interest at this point. Research for the average 150-foot story (35mm. film) requires not more than 45 minutes; while most stories are researched in considerably less than 30 minutes—made possible by an extensive reference library and a highly skilled staff.

Research work is done while the film is in the lab being processed. Film developing time is 1 hour, 28 minutes; cutting and editing an 11½-minute silent story requires 22 minutes. A comparable story with sound is cut within 40 minutes. The finished story is then spotted on a viewer by an assigned writer, and 45 minutes later the script is ready.

The changes in standard procedure which make this speed possible are worth recounting. For more than two years none of our editors has seen a work print on a news story: there is never enough time to make one. Moviolas are used only for the sound track, but for our editors these are not fast enough for picture checking at the speed they have to work.

Original negative is merely run through a viewer, and after cutting is sometimes not even printed, going out to the TV station before the patches are quite dry. When this happens the TV engineers reverse the negative to positive electronically in the transmitter, and TV viewers see an ordinary black-and-white image.

Telenews uses Wall newsreel cameras, redesigned by us, to shoot in sync, thus reducing substantially the time needed for cutting stories, as the sound and the picture are always in sync.

One of the greatest obstacles to speed in our operations is transportation, with regard to both incoming film and outgoing finished reels. Stories arrive daily by air from every part of the world. Special arrangements with airlines, airports and customs authorities expedite these shipments, and motorcycle messengers are kept busy around the clock touring New York's airports.

During the World's Series we faced the problem of just plain mass. From two to three thousand feet of film per game, shot by as many as five different cameras, had to be transported, edited and recorded in time to be on the air on the evening of the game. The film (35mm.) had to be cut to about 200 feet in length and then reduced to 16mm. width, as many TV stations have only the latter gauge equipment.

To assist the lab people in such cases, the exposed film magazines were taken direct from the cameras and rushed to the lab by motorcycle at the end of the second, fifth and seventh innings. This prevented an otherwise huge pileup of film at the end of the game, since the sections were handled steadily through the afternoon as soon as they arrived. Thus the lab people were able to work on innings one through five while the game still was in progress.

Heart Action Studied Through X-Ray Movies

Development of X-ray movies for use in studying and diagnosing heart disease is announced by the University of Rochester. An X-ray motion-picture camera was developed to photograph flow of blood, treated with an injection of opaque dye, through the heart and its vessels, with the possibility of showing up diseases. It was believed this was the first use of X-ray movies in heart diseases diagnosis.

The disclosure, made as the first newsreel on X-ray movies by Paramount News, was released in movie theaters throughout the country.

HO GRASS SKIRTS HERE! Hawaiian girls pose in formal dress for Ted Phillips, shooting a travelogue on Hawaii for Burton Holmes. Phillips, Holmes' ace cameraman, has photographed more than 10 of the renowned lecturer's travel films—all in 16mm Kodachrome—is now enroute to the Bahamas to start the eleventh. Ted, regarded one of the best 16mm color filmers in the business, got his start shooting 9mm movies.

Amateur Movies Televised Weekly From Hollywood

THE BEST FILMS produced by the country's leading amateur cameramen are being featured on Times-CBS Television station, KTTV, in Hollywood on alternate Wednesday nights from 9:00 to 9:30 p.m. The program is called "Hollywood Premiere" and any 16mm amateur film is eligible for consideration for screening. Prizes are awarded each film televised, and the maker interviewed.

Program is under the direction of Andy Potter, winner of many national amateur film awards and who is recognized as one of the top amateurs in the country. Films selected for a "Hollywood Premiere" on Television along with their producers will be introduced by Joan Nelson who has been starred in many of Potter's own films and who is a home movie hobbyist in her own right.

Amateur filmers desiring to submit films for "Hollywood Premiere" should write for entry blanks to "Hollywood Premiere," KTTV, 1025 N. Highland Avenue, Hollywood 28, California.

Golden Globe Award To Frank Planer For 'Champion'

Frank Planer, A.S.C., the night of February 23, received the Hollywood Foreign Correspondents' Association's "Golden Globe" award for best cinematography of the year for his filming of the Stanley Kramer production, "Champion." Planer also may take home an "Oscar" for the same picture the night Academy Awards are passed out.

Fitzpatrick Using Magnetic Sound For Travel Films

James A. Fitzpatrick, famed producer of travel films, for M.G.M., is traveling overseas to produce a new series in color for that studio. Where his previous travelogues have featured post-recorded narration exclusively, new series of films will have some on-the-scene sound and dialogue. For this, Fitzpatrick is using light-weight, portable Kinevox magnetic film recording equipment.

New Gevaert Sound Film

Scheduled for early demonstration to technicians in Hollywood is a newly-developed sound recording film being marketed by Gevaert Company in Europe. A. J. Van Gestle, export manager of the Belgian company, said the new film combines brilliant gradation, very high speed and finer grain than most films of this type, which results in greater resolving power.

New Eastman Color Film Tested By Hollywood Studios And Film Labs

Medium expected ready soon in quantity for general use.

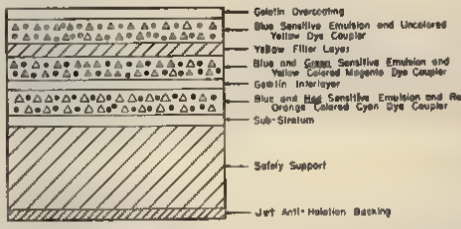
STEPS TAKEN BY Eastman Kodak Company to make available by June quantity production of its new single-negative single-positive color film, has many motion picture studios drastically revising future production schedules in anticipation of early use of the new color stock. Film will enable them to turn out dailies and release prints in their own labs.

In process of development at Rochester for several years, actual working footage was not made available to Hollywood until several months ago when, under guidance of Eastman technical men, the new color film was given tests at several studios. Immediate reaction was extremely favorable and Eastman continued to perfect the film and at the same time gear its plant facilities to start full-scale production this year.

The test footage, which was shot at 20th Century-Fox, Columbia Pictures and by Cinecolor, was screened recently for members of the American Society of Cinematographers. The reel of color shots was described by an Eastman spokesman as simply "a visual progress report on the medium and not to be construed as example of the ultimate results to be obtained with the film." Most of the cameramen present voiced their opinion of the color qualities of the film as "very good." It was stated then that the film would be generally available in quantities to anyone before the end of 1950.

The film, designated as Eastman Color Negative, Type 5247, is a multi-layer color film intended for use in conventional 35mm. motion picture cameras, such as the Mitchell, Bell & Howell, Eyemo, etc., which are used at present in shooting black and white film. It consists essentially of three light-sensitive emulsions, each sensitized differently, and coated on a safety support, as shown in the diagram above. Incorporated in the emulsion layers are dye couplers which react simultaneously during development to produce a separate negative dye image in each layer. Two of the dye couplers are themselves colored. This color is discharged during development in proportion to the development of the emulsion. The remaining colored couplers serve as automatic color correcting masks to aid in obtaining good color reproduction when the color negative is printed on the companion product, Eastman Color Print Film, Type 5381.

Cross Section of Film


Gelatin Overcoating
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Yellow Filter Layer
Blue and Green Sensitive Emulsion and Yellow Colored Magenta Dye Coupler
Gelatin Interlayer
Blue and Red Sensitive Emulsion and Reddish-Orange Colored Cyan Dye Coupler
Sub-Stratum
Safety Support
Jet Anti-Halation Backing

Eastman color negative film is color balanced for use under average daylight conditions, which includes sunlight plus some blue skylight (approximately 6000° K). The type of arc light currently being used in motion picture studios for other color processes is also satisfactory.

Tentative exposure is ASA 12. For older meters calibrated in Weston ratings and for older G.E. meters, the following settings are recommended: *Weston* (Daylight) 10; *General Electric* (Daylight) 16. These values apply when the meter reading is taken from the camera position and the subject has average reflectance, or if the reading is made on a gray card.

The lighting contrast for this film should be considerably lower than that used for black and white work. The ratio of fill-light to key-light should be from 1 to 2 or 3 and should seldom exceed 1 to 4 except where a special effect is desired.

Other specifications are: safety base with removable jet antihalation backing, standard 35mm. negative perforations, available in 100-, 200-, 400-, or 1000 foot rolls, with standard cores and windings.

Eastman color negative film may be processed in conventional type continuous processing machines, with minor modifications to allow for necessary 8 processing steps. Anticipating early use of this film, 20th Century Fox, Warner Broth-

(Continued on Page 102)

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BASIC MOVIE SEQUENCES

(Continued from Page 90)

medium shot is a sort of intermediate step between the long shot and a really close shot of the main subject. It is necessary to have such a shot because if we were to jump directly from the long shot to a closeup, the audience would be momentarily lost—it would not readily fit the magnified segment into its overall context.

The closeup, of course, is the ultimate goal of any well-planned sequence. An audience naturally desires a good close look at the main subject of the sequence. To deny the audience this privilege is to leave it unsatisfied, besides ignoring the most powerful function of the screen medium: that of being able to select any visual element, no matter how small, and blow it up to dominate the screen dramatically.

We have said that the above shots are all relative in terms of distance from the subject, area shown, etc. This is true. What one cameraman may think of a long shot may impress another cameraman as a medium shot, etc. In general terms however, you can think of the average long shot as showing a full view of the main subject, plus enough more to clearly indicate the surroundings or natural setting. Should you get too far away for this long shot, you stand the chance of losing the main subject in a vast expanse of background.

The simplest formula for building a basic film sequence is long shot, medium shot, closeup, re establishing shot. One can scarcely go wrong in using this pattern. However, in order that the sense of the sequence not be lost, it is advisable to write out in the form of a simple scene list, before starting to shoot, exactly what action will be taking place in each shot. Unless this is done, one runs the risk of having important action lost in the long shot, while the closeup becomes a static lifeless thing because the important action has already taken place. A bit of advance planning will help you avoid this cinematic blunder.

While the above formula is the simplest, and probably the best for guaranteeing a consistently acceptable result, it is by no means a hard and fast rule. As the filmer becomes more and more conscious of the techniques of screen continuity, he will want to vary the pattern for variety. For example, it is often effective to start a sequence with a closeup in order to immediately focus attention on a significant bit of action and then cut to longer shots for the purpose of showing where the action is taking place. This pattern offers fine opportunities for building suspense or surprise humor.

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For those who wish to go more deeply into the mechanics of movie-making, we should like to suggest the "moving camera" as a continuity device It is often effective to begin a sequence with the camera on a long shot and then pan to a closer shot, or vice versa. Also, if you are able to buy or build a small camera dolly, a whole new world of camera technique presents itself. You can start with a long shot and dolly in to a closeup, or you can work it just the other way around. The obvious advantage of the dolly shot is that it is the smoothest possible way to go from one shot to another without losing the audience On the other hand, the movement of the camera itself should be sufficiently paced that the important action is not held up purely for the purpose of allowing the camera to execute its movement.

As one goes more deeply into sequence planning, it becomes evident that there are more and more departures from the simple basic formula which can be used to good advantage. Sometimes an emphatic sequence can be built by using a series of large closeups, one right after the other. In this instance, the context is less important than the action itself. Once the camera has clearly established

(Continued on Next Page)

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the pattern of action, then the cameraman may move back to show the setting in which all of this action is taking place.

In planning a sequence it is necessary to bear in mind that the audience will see only as much as you, the cameraman, wish it to see—and that their entire impression of the action and the setting will depend upon what you frame in the view-finder. The cameraman, being in the position of seeing the entire situation, often takes it for granted that the audience will automatically see that much also, and so he does not show enough in his shots to really establish the setting. It is wise to adopt the audience point-of-view when planning the various shots.

In the initial sequence of a film, avoid making changes in camera angle too abruptly. For example, if you start out with a long shot and cut to a medium shot, at the same time completely reversing the angle, the audience will be left high and dry as to the spacial relationship of the various elements of the scene. By the time they straighten out their thinking and are re-oriented on the subject, they may have lost important action. It is wiser to keep the progression going either forward or backward in a relatively straight line, while still varying the angle enough for variety.

As in all phases of cine photography, experimentation will provide many unsuspected methods of building effective sequences. Start with the basic formula, and then build from there.

MATTS, MINIATURES AND METICULOUS PHOTOGRAPHY

(Continued from Page 83)

against black velvet, then printed in on that area of the scene, using the matt technique. The same procedure was followed in filming the upper third of the scene: first the miniature, then the people, then matt printing the various components to produce the final composite print.

Came next the climactic destruction of the Temple, all of which was photographed in miniature, with the people superimposed or matt printed in the scene. Readers who already have seen the picture will recall how Samson, having regained his strength, wreaks his vengeance on the Philistines by dislodging the massive stone columns supporting the huge idol, thus bringing down the Temple in ruin on the King and his followers who were gathered there to humiliate Samson.

Jennings had to wreck the miniature Temple set (37 feet high) and crash the idol (17 feet high) three times before he got a satisfactory take—proving that even inanimate things sometimes "fluff" their lines before the camera. The falling of the idol was filmed in slow motion, with the camera speeding the action up slightly as the idol crashed on the Temple floor. On the first take, the triggering device that was to release the idol failed to work; the second time the idol toppled over as planned, but the device that was to release the back wall and allow it to fall failed to work. A few tests and some additional adjustments caused everything to go off as scheduled on the third try, and Jennings hustled this take to the laboratory to look at the result. This was only the first step in making the scene, which is the high point in the picture. The next step was to put the hordes of terrified people into the scene, show them being crushed by falling stones and masonry, or hurtling through space as they fell from the collapsing Temple balconies.

This was done by first photographing the players performing on the full-scale set, which first had been completely covered with black velvet, then double printing this action over the shot of the crumpling Temple—a matter of routine printing for Jennings' Special Photographic Effects Department.

Readers unfamiliar with advanced special effects technique employed in the major studios today may be interested in knowing something of the procedure employed in this instance. Roughly, it consisted of making a traveling matt of the action staged against the black velvet which produced a solid background. The matt was made by first projecting the action film on an animation table, frame by frame. An artist then drew an outline on animation "cells" of the players in each frame. The figures were then inked in solid, the entire series of "cells" photographed a frame at a time, as in making animated cartoons, and the resultant film became the traveling matt used in superimposing the people over the shot of the crumbling Temple.

The traveling matt was combined with the picture negative at time of printing so that the print came through with the matted-out area unexposed. The film was then put through the printer again, this time with negative of the action of the players filmed against the velvet, and the players printed in on the unexposed, matted-out area. This resulted in a composite print of the two camera negatives without any double image or "ghost" effects.

Although for Jennings each new assignment inevitably presents some new photographic problem, he has yet to encounter any that he has not successfully overcome. Twenty years as head of Paramount Pictures' Special Photographic Effects Department have sharpened his capacity to meet any special effects problem tossed on his desk by that studio's producers.

Gordon Jennings three times has won Academy "Oscars" for Achievement in Special Effects—one each for "Spawn Of The North," "I Wanted Wings," and "Reap The Wild Wind." He also holds an Honorable Mention Certificate from the Academy for his technical accomplishment in developing Paramount's Nodal Point Camera Tripod, also five Nomination Certificates for other Technical Awards and Special Photographic Effects achievements.

His name is up again this year for an Academy Technical Award for the development of the electronic repeater described earlier here, and undoubtedly he also will be nominated for a 1950 Achievement Award next year for his noteworthy special photographic effects in "Samson And Delilah."

"OSCAR" NOMINEES

(Continued from Page 86)

"Laura.' In 1945, Harry Stradling was awarded an Oscar for his outstanding black and white photography of "The Picture Of Dorian Grey." And last year, Winton Hoch received one of the three Oscars awarded for the Technicolor photography of "Joan Of Arc," on which he collaborated with the late Joseph Valentine and William Skall, A.S.C.

William Snyder was a contender last year when "The Loves Of Carmen," which he photographed in Technicolor for Columbia Pictures, was nominated for a photographic award. He is a contender again this year for his work on "Jolson Sings Again."

Robert Planck was also a contender last year, "The Three Musketeers" which he photographed for M-G-M, having been nominated for an award in the Color Films class.

Charles G. Clarke is riding a potential winner again this year in "Sand," after just barely missing out last year with "Green Grass Of Wyoming," one of the nine 1948 nominees.

There were no foreign-made films nominated for Cinematographic Awards this year.

A full account of the winning films and the directors of photography who filmed them will appear in the April issue of the American Cinematographer.

COLOR TEMPERATURE

(Continued from Page 88)

for maximum range, or at 20, representing 2,000 foot candles for maximum sensitivity.

When using the Harrison Color Attachment a new reading should always be taken with any change of picture composition, the manufacturer points out, because a new source of light may change in color temperature. "Only the direct light falling on the subject should be measured for color temperature," Harrison explains, "because any reflected light from the scene will change the color temperature and give a false reading. Therefore, in using the Attachment, it should be held in line with the camera lens—and pointed directly at the camera lens—to get a correct reading. If this cannot be done, because it is impossble to stand in the camera field, then point the Attachment in the same direction so as to pick up the incident light, but not any of the reflected light from objects in back of the camera. Any indirect light or reflected light from the ground, buildings, walls, trees, etc, must be avoided or wrong readings will result."

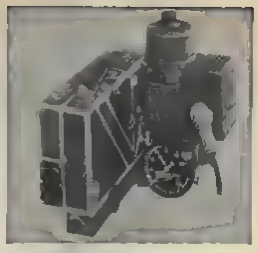
Thus it is apparent that the Harrison Color Attachment differs somewhat from other color temperature meters, which give color temperature readings by pointing the meter directly at the light source.

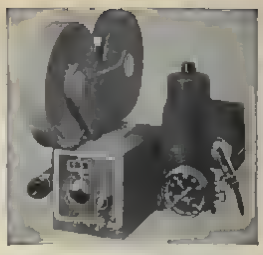
Harrison points out that readings with his Attachment will go as high as 30,000 degrees Kelvin for skies, while noon sun will render a reading of 5400 degrees Kelvin. Early morning or late afternoon readings will go as low as 3200 degrees Kelvin. Therefore, with every change in direction of reading, the meter may pick up more of one of the other kinds of light and, as a result, show large color temperature changes.

It should be noted that use of the Harrison Attachment calls for exclusive use of Harrison & Harrison color correction filters, or "corrector discs," as this company terms them. As already pointed out, the CC filter required for balancing the light for a given light condition and film is determined from the conversion table after reading the color temperature.

For the average photographer, it is claimed that as few as four Harrison & Harrison CC filters are all that are needed for normal color photography. Where it is desired to expand control to a primary range of completeness, additional groups of four each of CC filters may be added.

The Harrison Color Attachments are pre-set at the factory for normal color-relationship with all General Electric





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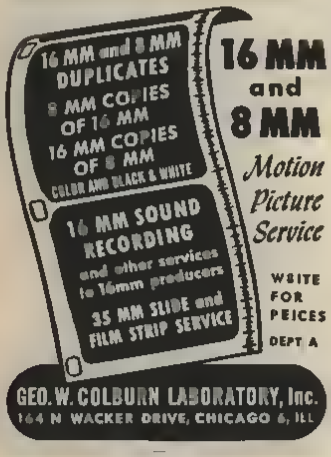
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type DW exposure meters. No adjustment is necessary unless some attention is needed in establishing a higher degree of color relationship between any individual or particular G.E. meter and the Attachment. To accomplish this, a minor adjustment is made in the alignment of the red and blue step-wedges of the Attachment—an adjustment easily made by the owner himself.

Hartley Harrison, whose photographic filters are known the world over, has pioneered in the study of color temperature and in developing methods for correctly determining color temperature and the means for balancing light for color films through use of technically correct filters. In 1946 he announced the first Harrison Color Temperature meter, which read directly for both degrees Kelvin and compensating filters. Continuing research lead to development of the present Harrison Color Attachment for use with the General Electric exposure meter, said to be the first complete, all-purpose light measuring unit. The logic of combining two instruments necessary to determining both light intensity and light quality for color photography is at once apparent.

MAGNETIC RECORDING

(Continued from Page 84)

on the first printing track to necessitate a new track for duplicating purposes. Through the use of discs, a number of original recordings can be retained without tying up vast footages of magnetic stock.

The magnetic recording and re-recording done at this studio has, thus far, been quite successful. The equipment we are using employs perforated 17½mm. film stock at a speed of 90 feet per minute. Flutter elimination is accomplished by spring-loaded compensating rollers and one flywheel. With good maintenance, a speed variation of one-tenth of one per cent can be expected. A signal to noise ratio of 57 db. and a frequency response of plus or minus one and one-half db. from 60 to 10,000 cycles are characteristics of the equipment which have proven very satisfactory for re-recording to film.

Among the many re-recording jobs we have completed to date have been interior and exterior shots for television spots in which the magnetic masters were transferred to printing tracks without editing, and Western features where the magnetic stock was cut to the picture before re-recording. Still another type consists of narrated pictures wherein music scoring is dubbed and mixed with the narration.

The conclusions we have reached are that the high signal-to-noise ratio, good frequency response, ease of handling and simplicity of operation — all characteristic of the magnetic medium — provide excellent re-recording to film. The end result being better sound at a lower cost to the producer.

EDITING

(Continued from Page 93)

almost $10.00 per roll. If the scene is overly long, necessitating considerable cutting, keep in mind this footage need not be wasted; you can probably use it in another picture, or perhaps make another, shorter film from all the excess footage culled from this one—but with a different slant.

Definitely delete under- or over-exposed shots. If a sequence comprising three or four cuts has one or two scenes in which the sky coloring is definitely lighter or darker than in the other scenes, do not splice a light scene following a dark scene, but try to intercut a closeup between them to conceal the error. Matching scenes for color should be one of your primary endeavors, for nothing so distracts the eye from a color picture's pictorial and story qualities as a sharp deviation in the overall color resulting from careless exposure. We all experience this, however, and the one way to gloss over the inconsistency is to employ the editing trick suggested here.

Next look for discrepancies in action —if there be action in your film—and don't hesitate to cut a scene sharply to make the action dovetail with that in the scene that follows. Panning scenes deserve critical attention, too. If you panned to the right and then backtracked a little again to the left, back up and cut the film where the reverse panning started. Double panning is poor photographic practice; if you indulge, at least you can correct it when editing.

On a lengthy photoplaylet, your editing should be done sequence by sequence for best results, just as films are cut and edited in the studios. In this way you can concentrate upon one sequence at a time, cutting and "polishing" it until you have it just right—then proceed to the next. It is much simpler to concentrate on a short individual sequence than trying to keep the entire picture in mind in cutting the whole thing at once.

Family films usually can be cut considerably, once the novelty of new footage wears off. Let those most recently filmed rolls "cool off" on a shelf for a while — but not too long! — and then screen them again and you'll see where certain cuts may be made to advantage.

Every owner of a cine camera will

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frequently indulge in "snapshot" movie making—that is, take camera along on a vacation or week end motor trip, and simply shoot the things that interest him as he goes along. Like still camera snapshots, these movies supply entertainment in recalling the pleasures of your trip, and more often than not are soon forgotten.

An imaginative movie maker, however, will turn such footage into entertaining movies good for endless repeated showings on his home movie programs. Taking several such rolls of film, he'll screen the lot, then draw upon his imagination for a continuity thread on which to string the scenes, inject a running gag for humor (which may call for some post-filming of additional footage) and in the end come up with an entertaining film—all salvaged from forgotten footage that was shelved after immediate interest in it waned.

Even a single roll of movie film shot of some momentous event will require some editing to bring it to the screen in expert presentation — the addition of main and end titles, necessary descriptive or explanatory titles, and the cutting out of badly exposed shots, and perhaps a re-arrangement of scenes to smooth the flow of continuity.

To those readers who have never seriously undertaken editing of their films, we strongly urge them to try it. Through editing you can overcome shortcomings in photography you observed when first you projected those rolls of film in which you may long since have lost interest. You can combine unrelated shots, even whole rolls of film, to make a completely new motion picture. You'll have a lot of fun re-aranging scenes, then observing the fresh new interest they create on the screen.

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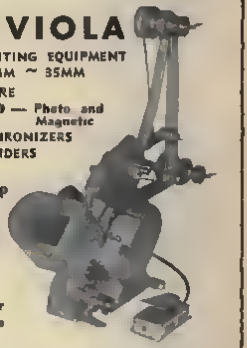

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EASTMAN COLOR FILM

(Continued from Page 95)

ers and Columbia Pictures already are making the necessary alterations and additions to their lab equipment to handle the film, while Cinecolor and Consolidated laboratories, catering to the independent film producer's needs, likewise are preparing to meet the demand for Eastman color film processing.

Both Fox and Warners have made test shorts with the film, which have been approved enthusiastically by the respective company executives. Recently heads of other major companies viewed these tests at Fox New York headquarters. When the "go ahead" sign is given by Eastman, it is expected that most of the studios will start their programs off by using the new medium for short subjects, launching full scale production later as cameramen and lab technicians perfect the technique of working with the new film.

To prep lab heads and technicians in processing procedures, Eastman Kodak Company last month conducted a series of seminars in Hollywood, inviting the key men of all local labs, studio and independent, to attend. Until the labs are fully equipped and ready to process the film, Eastman Kodak does not care to place the medium in use. As Kodak will do no processing of the film, responsibility rests with the various studio laboratories to develop and print the film. Toward this end they are now gearing equipment and personnel.

MEN WHO LIGHT SETS

(Continued from Page 85)

will change the colors. Low levels of illumination, which in black and white photography result only in obscuring shadows, will often change the appearance of background, costumes, or features. Here, more than in a black and white film production, the director of photography's knowledge of light sources and their relation to or effect on colors is vitally important. Today, the increasing use of color films has added still another factor to set lighting problems for him—that of color temperature. With the increasing number of color film processes being used, or about to be used, by the motion picture industry, color temperature becomes even more of a prime factor than foot candles in lighting motion picture sets. Directors of photography are, of course, keeping abreast of these developments. It's part of their job to know about color and color temperature and especially the tricky part that reflected light can play in upsetting color temperature balance—a real photographic problem.

Quite obviously all this is outside the scope of operations of the gaffer although a good gaffer will endeavor to acquire a rudimentary knowledge of lighting technique for color films, if for no other reason than to enable him to cut corners in roughing in a set.

Set lighting technique, therefore, is not a question of volts and amperes, but rather the method employed to secure results, which becomes an individual problem—the problem of the director of photography. Indeed it is too closely tied in with photography itself ever to be detached and made the responsibility of a second individual.

In the course of production, the camera changes position several times on a set in order to photograph *long shots medium shots* and *closeups*. The director of photography must rearrange some of the lights on the set for each of these camera changes. A typical interior *long shot* filmed in black and white usually calls for lamps placed high on parallels around the walls of the set, behind doorways and windows, on backings, and on the floor in the foreground.

When the camera is moved in for a medium shot, the director of photography will have his gaffer re direct some of the overhead lights. As a rule no major changes are required in location of overhead or backlighting units.

When moving in for a closeup shot, the director of photography calls for rearrangement of the front floor-lighting units and still further re-direction of the lamps overhead.

Perhaps the closest cooperation between the director of photography and the electrical crew is required when a follow shot is to be made that calls for the camera, mounted on dolly or crane, to follow the action around the set or even from room to room. Here the entire area of travel must be lit properly, and it is often necessary to raise or lower illumination levels in certain areas during the actual shooting — accomplished by dimmer banks and by cueing the operators.

Thus it may be seen that photographing a motion picture is something more than directing the camera on the scene setting focus and exposure and recording the action. These are the mechanical steps. The quality of the photography that results depends upon the light directed into the scene, how it is directed, its quantity and quality. That is the responsibility of one man — the director of photography.

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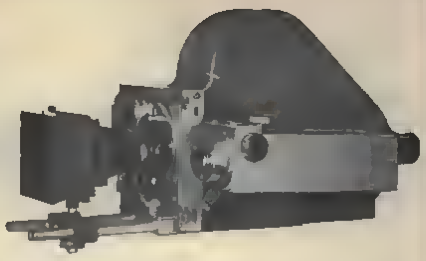

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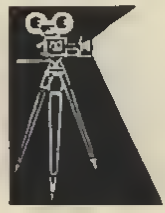

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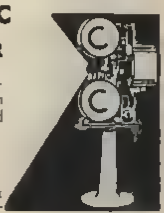

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Current Assignments of A.S.C. Members

Major film productions on which members of the American Society of Cinematographers were engaged as directors of photography during the past month

Columbia

• VINCENT FARRAR, "The Firefighters," with Bill Williams, Barton MacLane, Marjorie Reynolds, Gloria Henry Seymour Friedman, director

• CHARLES LAWTON, "The Fuller Brush Girl," with Lucille Ball, Eddie Albert, Jeff Donell, Carl Benton Reid and John Litel Lloyd Bacon, director

Eagle-Lion

• LIONEL LINDON, "The Sun Sets At Dawn, with Sally Parr, Philip Shawn, Walter Reed and Lee Fredericks Paul Sloane, director

• ERNEST LASZLO, "The Jackie Robinson Story," with Jackie Robinson and Ruby Dee Al Green director

• ELMER DYER, "Timber Fury," with David Bruce, Laura Lynne, Nicola Di Druno and Sam Flint Bernard B Ray, director

Independent

• HARRY C NEUMANN, 'Phantom Of The Sea," with Laura Elliot, Jim Arness, Bill Kennnedy, et al Norman Dawn, director

Lippert

• BENJAMIN KLINE, "Operation Haylift, with Bill Williams, Ann Rutherfurd, Jane Nigh and Tom Brown William Berke, director

• KARL STRUSS, "None Came Back," with Osa Massen, Hugh O'Brian and John Emery Kurt Neumann, director

M-G-M

• JOSEPH RUTTENBERG, The Miniver Sequel, ' (In Color—shooting in England), with Greer Garson, Walter Pidgeon, John Hodiak and Cathy O'Donnell Henry Potter, director

• ROBERT SURTEES, "King Solomon's Mines" (Technicolor) (Shooting in Belgian Congo) with Deborah Kerr, Stuart Granger and Richard Carlson Compton Bennet, director

• ROBERT PLANCK, "Summer Stock," (Technicolor) with Judy Garland, Gene Kelly, Gloria DeHaven, Phil Silvers, and Eddie Bracken Charles Walters, director

• HARRY JACKSON, "Three Little Words,' (Technicolor) with Fred Astaire, Red Skelton, Vera Ellen, Arlene Dahl, and Keenan Wynn Richard Thorpe, director

• WILLIAM SKALL, "Kim," (Technicolor—shooting in India) with Errol Flynn, Dean Stockwell and Paul Lukas Victor Saville, director

• WILLIAM SNYDER, "The Toast Of New Orleans," (Technicolor) with Kathryn Grayson, Mario Lanza, David Niven, James Mitchell Norman Taurog, director

• PAUL VOGEL, "Visa," with Hedy Lamarr, John Hodiak, James Whitmore, and George Macready Joseph Lewis, director.

• RAY JUNE, "Crisis," with Cary Grant, Jose Ferrer, Paula Raymond, Signe Hasso, Ramon Navarro, Antonio Moreno Richard Brooks director

• JOHN ALTON, "Father of the Bride," with Spencer Tracy, Joan Bennett, Elizabeth Taylor, Don Taylor, Billie Burke, and Leo G Carroll Vincent Minnelli, director

• NORBERT BRODINE, "Right Cross," with June Allyson, Dick Powell, Ricardo Montalban, Lionel Barrymore and Theresa Celi John Sturges, director

• GEORGE FOSLEY, "A Life Of Her Own," with Lana Turner, Ann Dvorak and Barry Sullivan George Cukor, director

• WILLIAM MELLOR, "The Next Voice You Hear with James Whitmore, Nancy Davis, Gary Gray and Art Smith William A Wellman, director

Monogram

• WILLIAM A SICKNER, "Square Dance Katy," with Vera Vague, Jimmie Davis, Phil Brito, Virginia Welles Jean Yarbrough, director.

• WILLIAM L O'CONNELL, "Jiggs And Maggie Out West," with Joe Yule, Rene Riano, George McManus, and June Harrison William Beaudine, director

• HARRY C NEUMANN, "Guns Roar In Rock Hill," with Whip Wilson, Andy Clyde and Reno Browne Wallace W. Fox, director

• WILLIAM A SICKNER, "A Modern Marriage," with Robert Clarke, Margaret Field, Nana Bryant and Reed Hadley Paul Landres, director

• WILLIAM A SICKNER, "Henry Does It Again," retitled "Father Makes Good," with Raymond Walburn, Mary Stuart, Barbara Brown, Gary Gray, and Olin Howlin Jean Yarbrough, director.

• MARCEL LEPICARD, "High Stakes," with Leo Gorcey Huntz Hall Hillary Brooke, and Lyle Talbot William Beaudine, director

Paramount

• DANIEL FAPP, "Union Station," with William Holden Barry Fitzgerald, Nancy Olson, and Jan Sterling Rudolph Mate, director

• LEE GARMES, "My Friend Irma Goes West," with Marie Wilson, John Lund, Diana Lynn, Dean Martin and Jerry Lewis Hal Walker, director

R.K.O.

• JOSEPH WALKER, "Come Share My Love," with Irene Dunne, Fred MacMurray, Andy Devine, William Demarest, Gigi Perreau and Natalie Wood George Marshall, director

• WINTON HOCH, "Jet Pilot," (Technicolor) with John Wayne, Janet Leigh, J. C. Flippen, Paul Fix and Richard Rober Josef von Sternberg, director

• HARRY WILD, "Sons Of The Musketeers," (Technicolor) with Cornel Wilde, Maureen O'Hara, Alan Hale, Jr., Nancy Gates Lewis Allen, director

• NICK MUSURACA, "White Rose For Julie," (Westwood Prod) with Robert Mitchum and Faith Domergue John Farrow, director

• LEO TOVER, "Story Of A Divorce," with Bette Davis, Barry Sullivan Kent Taylor, and Betty Lynn Curtis Bernhardt, director

• NICK MUSURACA, "The Wall Outside," with Jane Greer, Dennis O'Keefe and Lisabeth Scott John Cromwell, director

20th Century-Fox

• JOE MACDONALD, "Outbreak," with Richard Widmark Paul Douglas, Barbara Bel Ged des Elia Kazan, director

• MILTON KRASNER, 'Rawhide," with Tyrone Power, Susan Hayward, Hugh Marlow, Dean Jagger and Edgar Buchanan Henry Hathaway, director

• JOSEPH LASHELLE, "Where The Sidewalk Ends," with Dana Andrews, Gene Tierney and Gary Merrill

• LESTER WHITE, 'Dark Challenge, retitled "The Challenge," (Thor Prodn) with Mickey Rooney, Beverly Tyler and Pat O'Brien Tay Garnett, director

United Artists

• FRANK PLANER, 'Three Husbands,' (Gloria Films) with Emlyn Williams, Eve Arden Howard de Silva, Ruth Warwick and Bilhe Burke Irving Reis, director

Universal-International

• RUSSELL METTY, 'Peggy (Technicolor) with Diana Lynn, Charles Coburn, Charlotte Greenwood, Barbara Lawrence Frederick de Cordova, director

• MAURY GERTSMAN, "Louisa," with Ronald Reagan, Ruth Hussey, Charles Coburn Edmund Gwenn, Spring Byington, Piper Laurie and Scotty Beckett Alexander Hall, director

• IRVING GLASSBERG, "Panther's Moon" retitled "Train To Lausanne," with Howard Duff, Marta Toren, Philip Friend, Robert Douglas, Walter Slezak and Philip Dorn George Sherman, director

• WILLIAM DANIELS, "Winchester 73," with James Stewart, Shelly Winters, Dan Duryea Stephen McNally Anthony Mann, director

Warner Brothers

• PEVERELL MARLEY, 'Pretty Baby," with Dennis Morgan, Zachary Scott, Betsy Drake, and Edmund Gwenn Bretaigne Windust, director.

• SIR HICKOX, "Lightning Strikes Twice," with Richard Todd, Ruth Roman and Mercedes McCambridge King Vidor, director

• CARL GUTHRIE, "Two Million Dollar Robbery," with Steve Cochran and Gaby Andre Andrew Stone, director

• WILFRID CLINE, "Sugarfoot," with Randolph Scott, Adele Jergens, Raymond Massey, S Z. Sakall, and Hukh Sauders Edwin L Marin, director

BULLETIN BOARD

(Continued from Page 80)

cano," an independent venture of his, in Italy recently. He described, for the benefit of cinematographers who may be assigned to photograph pictures there, some of the technical hazards and working conditions they may expect to encounter in Italian locations.

•

JOSEPH WALKER, A.S.C., recently moved his bag of cinematic tricks from the Columbia lot over to nearby R.K.O studios where he directed the photography on "Come Share My Love," starring Irene Dunne and Fred MacMurray. During his off hours, Walker continues to follow the progress of television and to develop photographic optical devices tending to improve that medium.

He makes the most of moonlit moments . . .

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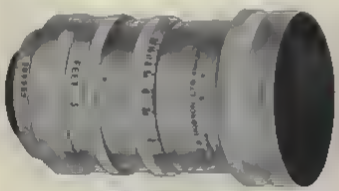

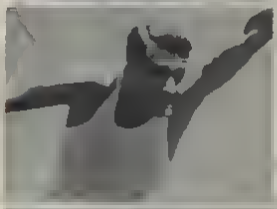

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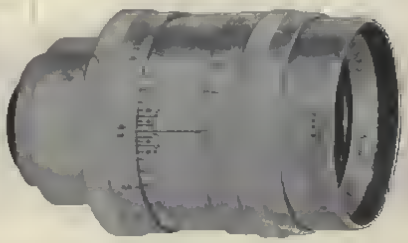

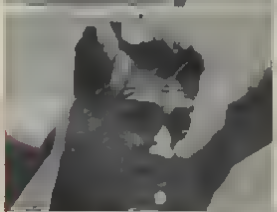

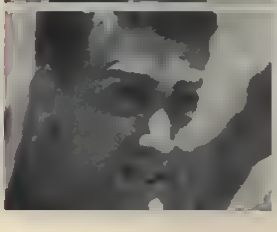

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